

INFORMATION TECHNOLOGY

COURSE WORK EXAMINATION

Time: 1 hour

Answer All Questions

Write complete sentences when answering all questions.

1. Identify each of the following languages as first, second, third or fourth generation language:
 - a. Pascal and Structured language;
 - b. 6800 assembly language;
 - c. Structured Query Language;
 - d. Fortran and COBOL.

(Total 2 marks)

2. Write algorithm using pseudocode to do the following sequence of tasks:
 - a. Read in two values;
 - b. Multiply both values by the number 10 and add the results;
 - c. Square both values and add the squares;
 - d. Check if the answer to (b) is greater than the answer to (c);
 - e. If the question c answer is greater, print a statement indicating that "The squares have won". If the question b answer is greater, print a statement indicating that "The Products have produced a win".

(Total 8 marks)

3. Explain the differences between the following:
 - a. Logic Error and Syntax Error;
 - b. Source Code and Object;
 - c. Read and Write;

(6 marks)

4.
 - (a) With regard to data storage, what is the difference between a byte and a word?
 - (b) Explain the difference between odd parity and even parity.
 - (c) With respect to information being read from a hard disk, what is the purpose of a BUFFER?
 - (d) The information contained in ROM cannot be changed. What is the purpose of ROM?

(7 marks)

5. Copy EACH of the following and state whether it can be described as **(A) soft copy, (B) hard copy (C) both hard and soft copy, or (D) neither hard or soft copy:**
 - (a) Sound
 - (b) Microfilm
 - (c) Visual Display Unit
 - (d) Non-Impact printer**

(4 marks)

6. List TWO advantages and TWO disadvantages of an integrated software package over a collection of separate application packages under a common operating environment.
- (b) What is the difference between a command line interface and a graphical-user interface?
 - (c) You have one diskette that you use to store files related to the work, you do for school, your club and home. Describe an efficient way to organize the various files on your diskette.
 - (d) You boot-up your computer but nothing is displayed on the monitor. List TWO things you would do to troubleshoot the problem.

(11marks)

7. (a) Convert the decimal number 25 to binary, using an eight-bit representation.
- (b) The binary number 1100101101 uses 10 bits to store sign and magnitude. What is the decimal number equivalent?
 - (c) State the Binary Coded Decimal (BCD) representation for the decimal number 358.
 - (d) State the eight-bit twos complement representation of the decimal number 63.

(7 marks)